THE GENESEE FARMER.

Vol. VI. ROCHESTER, OCTOBER 1, 1836. No. 40.

Published by Luther Tucker.

TERMS.—The Farmer is published every Saturday, making an annual volume of 416 pages, to which is added a Title-page and Index, at the low price of $2,50, or $2,00 if payment is made at the time of subscribing.

☞ All subscribers must commence with the volume, Jan. 1, or with the half volume, July 1. No subscription taken for less than six months.

☞ THE MONTHLY GENESEE FARMER is made up of selections from this paper, and published on the first of each month, forming, with Title-page and Index, an annual volume of 200 pages, at the low price of FIFTY CENTS a year, *payable always in advance.*

THE GENESEE FARMER.

SATURDAY, OCTOBER 1, 1836.

Notes of our Travels.

Having lately traveled through several counties of this district, we propose to detail some of the observations and reflections which we made on the journey.

In the valley of Salmon Creek in Cayuga county, we observed that the leaves of the Indian Corn had become discolored and sere, in consequence of frost which happened some time in last month. In the more open country, however, subject to a free circulation of air, we saw no such effects; but on the morning of the 6th instant another frost occurred, which we believe has not been equaled in severity so early in the season, since the year 1816. The Indian Corn and Buckwheat in many places, were nearly destroyed; and in most places more or less damaged. The Potatoe tops also in low situations in the counties of Wayne and Seneca, were killed to the ground.

This calamity in connection with the light crops of wheat, will render it the duty of every farmer to save every thing that is suitable for human food, fattening his pork and beef on such articles as cannot be kept till next summer; and even then we apprehend that the *poor* on the rugged sterile hills and in many of our cities and villages, will be subject to great privations. Our canals, by furnishing the means of cheap transportation, will do much towards equalizing the pries of bread-stuffs; but if there are not provisions enough in the country to support its inhabitants, as many persons seriously believe, the calamity will be lessened but not removed. We are not *alarmists*, but we think it well to look out a-head.

We have rarely had so good an opportunity to observe how very unequally the frost has operated in the same field. In some low grounds where the corn and buckwheat have been generally killed, small elevations in the surface of not more than a foot or too, *seem* to have preserved the plants in their full state of greenness; but on the contrary, in one potatoe field the higher part was damaged, and the lower part untouched. On inquiring into the particulars however, the same principle appears to have operated. The higher part of this field is mucky or spongy, while further down the slope the ground is dry and solid, showing that more depends on the *texture* of the soil than on its relative *altitude*. The first case we have mentioned will not contravene but rather confirm this opinion, though altitude doubtless, has an effect; and in some cornfields extending from the flats up the hill sides, the greenness which increased with the ascent, might properly be ascribed to both circumstances.

But how do these circumstances produce such phenomena? We presume it will not be difficult to explain. Frosts which occur near the close of spring, or the commencement of autumn, are chiefly owing to two causes; radiation and evaporation. In some of our earlier volumes, we have noticed that the heat in a metallic vessel filled with hot water, may be let off six times as fast, simply by painting its surface black. This result is entirely independent of the contact of colder substances; and the open ground may freeze when the temperature of the air only a few feet above it, is ten or twelve degrees warmer. At present we shall be brief on this subject. When the heat radiates to a *clear* sky, it is lost in the depths of ether; and when it is *calm*, the warmer air above is not whirled down on the surface. It is partly owing to these causes, that frost in moderate weather, can only occur under a *clear, calm* sky.

We may take a further view of this matter. Professor *Leslie* has shown that surfaces which most rapidly absorb heat, also radiate it most freely. The property of black soils in this respect is well known; and hence we may expect them to be more subject to vernal and autumnal frosts than pale colored soils.

But the effects of evaporation must also be taken into the account. Some idea of its amount may be conceived by those who have watched the fog spreading over meadows in a calm evening. These exhalations rise so much more freely from black spongy soils, that the depressions of the land may be traced out by the fog that covers them; and it is along such winding swales that the corn and potatoes are most commonly damaged by the frost. It may be said indeed that fog keeps off the frost; but the atmosphere is not always in a state to condense the vapor which rises, though it is *then* invisible, and which requires for its production a large supply of heat. This heat is abstracted from the soil which cools rapidly in consequence.

At Waterloo we listened to a conversation on the course which a farmer ought to pursue when his corn has been struck by the frost so early in the season. Had the crop been more mature all would have been in favor of cutting it up without delay, and setting it in small stooks; but its greenness in the present case, caused an objection. One old farmer said that corn would ripen when deprived of its tops by the knife, and why should it not ripen when deprived of its leaves by the frost? But not all the leaves were killed, and the juices were fresh in the stalk. He thought the best management was to let it alone.

We listened without speaking, but we have since been told by some who have examined ears of corn from time to time, that there is a prospect of its ripening much better than was expected. We allude to thht which remains uncut.

Some farmers however, have tried the experiment of cutting up a part, and leaving a part to stand; and we hope to be favored hereafter with the result.

On some farms, we observed that the old practice of topping corn still continues; but we believe it is entirely confined to the old fashioned farmers: *such as know too much to need an agricultural paper.* We are not ambitious to undertake the task of instructing them, but our readers may do well to remember that exact experiments have shown a great loss from that kind of mutilation. The leaves are a most important appendage to the plant. In these the *sap* is elaborated into *juice;* and fruits deprived of this benefit are generally, if not always, insipid or nauseous. Strip the Vine of its leaves and the grape is worthless. Whether the *flavor* of corn is materially injured by this process, or not, we cannot say; but the loss in *quantity* admits of no dispute. Ch. Woodson of Virginia, had the tops and blades taken from several rows of Indian Corn, leaving the same number of rows untouched; and discovered when the grain was harvested that the corn of the unmutilated part, *weighed more than the corn and fodder put together* of the part which was topped and bladed. He says, "The whole labor of gathering and curing the fodder and tops (no inconsiderable item) was entirely lost."

As the subject is one of great interest, we *again* present to our readers a remark of the Editor of the Farmer's Register which was appended to the communication: "If the absolute loss of labor in this usual and long prevailing practice of Virginia, is as great as we have supposed, and even half as great as may be inferred from the result of this experiment,—the amount of *the whole annual loss* and tax so paid, IF SAVED, *would be enough to defray the cost of constructing all the canals and railways now in progress in the state,* and *the expenses of the General Assembly to boot.*"

Novel Modes of Vegetation.

We copy from "Letters from Mexico," by an American resident in that city, the following curious modes of promoting vegetation for a particular purpose. The process is part of the arrangements for the celebration of Palm Sunday in the church of the Profesa.

"The pious have been for some time occupied in preparing gifts for the monuments placed in the various churches, in commemoration of the death of our Savior. These *regalos* consist principally of wax candles for the evening illumination, pots of orange and other trees, and vases of plants of various kinds. Among the latter may be named those whose exterior is covered with the plant called *chia.* The mode of preparing them being rather curious, a short description may serve to amuse those who are fond of experiments. The seeds of the plant being of a mucilaginous nature, adhere together after being steeped sometime in water, and thus form a paste enveloping the germs of the future plant. This paste is spread round a porous earthenware vessel filled with water, which passing through the pores, keeps the chia moist, and

in a short time the seeds germinate, and throwing out their first leaves, cover the vessel with a beautiful green mantle. Fillets of colored or gold paper, being placed around the neck, and a boquet of flowers in the water, which again is not unfrequently surmounted by a small flag, it forms an acceptable gift from the votaries of the church. * * * * Occasionally large mats are sown with wheat, and being kept well watered, it germinates, and forms a handsome turf carpet for some distance around the high altar." G.

Durability of Wood.

The subject of the durability of different kinds of wood when exposed to the action of air and moisture, though one of great importance to the farmer, and the public at large, does not seem to have received that degree of attention and elucidation it deserves. The Teak tree (*Tectona grandis*) of the East Indies, and the Live Oak (*Quercus virens*) of our southern forests, appear to be nearly indistructable when employed as timber, and in naval architecture. But these from their natures cannot be cultivated in the northern states, and we must seek in our forests trees which shall approach or rival the above in excellence and durability. Fortunately these qualities are found nearly in perfection in the Yellow Locust, (*Robinia pseudacacia*,) and the Red Cedar, (*Juniperus virginiana*,) and in a lesser degree in many others, a knowledge of the comparative durability of which, properly ascertained, would be of essential service to the public.

Thirty-two years since, in enclosing some newly cleared field, we had occasion to set some bar posts, and at a point where four fields cornered we placed one so that it served for four pair of bars, one to each field. The post was the common white cedar, (*Cupressus thuyoides*,) cut from a thrifty tree fourteen inches in diameter, the holes on the four sides cut in the usual manner with a narrow axe, the bark stripped from the whole, and the large end set two feet in the earth, which at that place was rather moist. After standing more than twenty years, or until the basswood fences with which it was connected had rotted down, it was removed to another position, where it has since served for two pair of bars and one gate. At the time of removal it appeared quite sound, and present appearances indicate a duration of another twenty years at least. From our experiments we are convinced that large posts are far more durable than small ones, and that those which occupy the whole diameter of the tree, are better than sawed or quartered trees of equal size.

In the Rail Road Journal, in an article on the advantages of lime as a preservation of timber, the following instance of its effect on the durability of the White Pine, (*Pinus abies*,) is given. The planks were a parcel of pine planks used as a platform on the ground, on which to make lime mortar. This platform was laid by the informant's grandfather in a corner of the yard, and used every year more or less for the purpose of a mortar bed. His father continued it in the same use; himself, the grandson, continued it for a time, as long as he had occasion, after which it lay some years unused, and overgrown with grass and weeds. At length wanting the ground for another purpose, he had it torn up and removed, expecting to find the planks entirely rotted, but to his surprise found them sound, and, to use his own forcible expression, "as hard as a bull's horn." This was after they had lain exposed to all the vicissitudes of the atmosphere, and in contact with the surface of the earth, about sixty years.

In the year 1800, a Mr. Atkinson, in the employ of the Hudson's Bay Fur Company, discovered on Old Factory Island, in Jame's Bay, a branch of the Hudson's Bay, a cedar post, about a foot square and five feet high, on which the following inscription had been cut, and all the letters of which were distinctly visible: "In the year 1692 wintered three ships at this Island, with one hundred and twenty-seven men, under the government of Captain James Knight. Then we erected this monument in remembrance of it."

This furnishes the greatest instance of duration in timber set in the earth, and constantly exposed to atmospheric influences, we have any where noticed, and we believe there are few kinds of timber which would endure so long. This notice does not state the kind of cedar employed, but from its frequency on those islands and coasts, there can be no doubt of its being the red cedar, a kind which, as stated above, is almost imperishable.

Next to the kinds above stated, rank in durability the various kinds of pine and spruce; the the white oak, chestnut, red elm, black walnut, and red beach; all furnishing timber of good quality, but not such as will, like the above, resist for a long period the attacks of time. In purchasing timber, price should not be so much regarded as quality and durability, as a rail or a post that will last fifty or sixty years, is worth far more than the usual difference charged between such, and those which will endure only twenty-five or thirty. G.

Grapes.

We hope that amidst all the new things that are brought before the public, which have in their success a tendency to contribute to our prosperity and advance our comforts, some, which may now be considered as old, will not be entirely forgotten. While many are engaging with such flattering prospects of reward in the culture of the mulberry, the manufacture of silk, and the making of sugar from beets, we hope that grapes for wine and the table will not be entirely overlooked. For a year or two the columns of the Farmer bore evidence of the interest the raising of the grape excited; but from some cause which remains to be explained, little or nothing is now heard on the subject.

We cannot think that the reason is in the progress of the temperance cause, for desirable as is universal temperance, we do not think it would be in the least infringed by a glass of domestic pure grape juice; nor has the fondness of the public palate for grapes, undergone any material abatement. If the attempts at cultivation —and we know they were numerous—have been failures; if it has been ascertained that our soil and our climate is unfit for the growth and maturity of the grape; if it is found that neither the domestic or the foreign vine can be made profitable for fruit or for wine, those who have made these experiments are in duty bound to lay the results before the public, that no more needless expenses should be incurred, or time unprofitably spent, in hopeless attempts at cultivation. In the course of the three or four years that have elapsed since the subject first engaged the attention of the western gardeners and agriculturists, much valuable knowledge of the vine, its treatment, the diseases of the fruit, and the best kinds for propagation in the Genesee country, must have been acquired, and we trust that some of this knowledge will ere long be imparted to the columns of the Farmer, for the benefit of its numerous readers. G.

Things Worth Considering.

In the Georgical Essays, it is stated that from experiments carefully conducted, it was shown that wheat gathered ripe, lost in 49 days nearly one-tenth of its weight; barley in 40 days lost one-seventh of its weight. This was in September. In October wheat lost in 24 days 2 lbs. 1 oz. in the bushel of 70 lbs. Grain stacked till April sustained a loss of nearly 35 per cent. The Farmer's Magazine states, that Indian corn gathered dry and shelled in October, had lost in the May following nearly 7 per cent. in measure. This was in England; in this country but few experiments of this kind have been conducted; and it is very desirable, in order that all interested in the selling and buying of grain may fully understand the ground they are going upon, that this subject of the shrinkage of grain should be properly investigated. Every farmer knows that garin shrinks rapidly, though the exact amount is rarely made the subject of calculation.

If the above estimates are correct, and we know no reason why they are not, farmers should calculate carefully the probable chances of a rise in the prices of grain, before they conclude to keep theirs on hand for any length of time, or over the winter. That the loss, in shrinkage and wastage, in a lot of wheat kept from September until April or May, will fully equal 10 or 12 per cent. we fully believe. In other grains the loss would be still greater. Unless therefore a farmer has well founded expectations of quite an advance in the spring prices on those of the fall, it is clearly his interest to thresh and sell as soon as the fall prices are fairly established. This calculation of chances is, however, rather nice work for the farmer, and the best rule for him to adopt is, to dispose of whatever he has to sell, whenever an offer is made giving a decent profit on the cost of production.

Orchard Grass and the Yellow Bird.

A person who is fond of nature's music and her "winged flowers," cannot do better than to sow a quantity of the orchard grass for the accommodation of the cheerful and beautiful yellow bird. From the time that its seeds are fairly out of the blow until they are fallen off or devoured, a patch of this grass will be frequented by these little birds in troops, singing and eating alternately from "morn till dewy eve." In getting the seed it displays a tact quite amusing. lighting on the tall stems of the grass, it gently sways them down, and generally some of the

heads in this process of settling will come within reach. Should none be convenient for picking from, it will draw one of the heads to it, as it sits perched on the stem, and holding it with one of its feet, finish the seed at its leisure. So fond is this bird of the orchard grass, that where a person has but a small quantity, and is anxious to save it for seed, it will be necessary to cut it as soon as the seed is sufficiently matured for growing, which will be when the stalk and head become partially dried, and brown. c.

Monroe Garden and Nurseries.

Mr. Rowe, the enterprising proprietor of this establishment, has just issued a new Catalogue, embracing a list of Fruit and Ornamental Trees, Shrubs, Herbaceous Plants, Bulbous Roots and Green House Plants, making a pamphlet of 48 pages. At his request, we send a copy of the Catalouge to most of the subscribers to the Farmer. The postage on it will be 3 cents for any distance less than 100 miles from Rochester, and 5 cents if over 100 miles.

From the Quarterly Journal of Agriculture—for June.

On Preserving Potatoes and Raising them

FROM SEED—BY SIR G S MACKENZIE, BART.

The Highland Society, always anxious to procure information, has offered a premium for the best and approved account, founded on experience, of the most successful method of preserving potatoes in good condition, in their natural state, for a period of not less than ten months from the time of their being taken up. I hope to be able to give to the Society satisfactory information on the above subject, having paid long and particular attention to the potatoe, and to state some circumstances which do not appear to be so generally known as I presumed they were until I saw the offer above quoted.

Of various methods I have tried for preserving potatoes from frost, that practiced most commonly seems to be the best, viz: Making a shallow pit about a foot and a half deep, on a dry spot, and heaping the potatoes like a roof to the height of about four feet. On the heap thus formed, straw is laid to the thickness of about eight inches, and over this the earth taken out of the pit, the whole being beaten firm by the back of a spade. Some time about the end of February, or beginning of March, the pit is opened, and the potatoes turned over, all the shoots being picked off. I may here remark, that where a few side roots have proceeded from the shoots, I have planted them, and had almost as large a product as from sets. The mode of planting them is to cut a drill with a spade so deep that the shoots may be covered about two inches. They are laid inclined upwards towards the soil, covered, and another drill made, and so on. The only risk is from frost; for if once nipt down, their shoots do not recover so readily as those from sets. On this subject I beg to add, that for early potatoes it has long been my practice to spread sets on the floor of a vinery, or on a hot bed in March, with a little sand over them. By the time there is little risk of frost, the shoots are long enough for the sets to be planted out about the middle of April. I have frequently had the shoots nipt down, but they always recover; that is, new shoots sprung up in a very short time, and I never observed that this made any difference in the period of the tubers becoming fit for use. The early potatoes I use are the London early for the first crop; some of my own, which is a little later, and remarkably mealy for an early potatoe. After the heap is turned over, as I stated above, it may be again covered, and the potatoes allowed to remain a month longer, after which they should be removed to a barn or shed, and picked. They should now be frequently turned over, and picked free of shoots. If the eyes of a potatoe are scooped out, it will gradually dry, if properly exposed; and it may then be scraped into flour though not very white. In this state they will keep for an indefinite time; and there is no risk of their becoming muty, as flour does, dried potatoes might be found useful during long voyages, though potatoe flour is better.

It ought to be made generally known that there are varieties of the potatoe which, though sufficiently protected from frost, will not keep, *under any management*, for more than a few months. Do what we will they decay, owing to their natural constitution; other varieties again will keep very long without any trouble. Hence the Society's proper object is not to offer a premium such as the one which has given occasion for the present communication, but to offer one for raising new varieties, and producing one or more with as many as possible of the qualities which a potatoe is desired to possess. The same observation applies to the keeping of apples and pears, and various fruits and roots. Long keeping is a particular property belonging only to some, and not to all varieties.

Some varieties of the potatoe are best for the table early in winter, and others are best in spring. Instead of having the trouble to raise different sorts for different seasons, it is best to sow seeds and to procure a number of varieties in this way for selection. It is now about twenty years since I first began to raise new varieties; and I will now state my mode of proceeding, that others may follow it if they think fit.

I first noted down the qualities which it was desirable a potatoe should have. These are, 1, dryness or mealiness; 2, agreeable taste; 3, moderate size; 4, regularity of shape, not having deep eyes; 5, not bursting when boiled; 6, not having a tendency to shoot at an early period; 7, long keeping; 8, productiveness. Among hundreds of varieties I have not found one possessing *all* of these qualities, but I do not despair.

Having gathered the apples from different varieties, I keep them till spring, when I open them, take out the seeds and dry them. A piece of ground being prepared by digging in some manure, but sparingly, and the surface being finely raked, the seeds are dropped thinly into shallow drills, two feet asunder. When the plants appear, they are thinned out to eighteen inches in the rows, and I have usually selected the strongest. Those taken out may be transplanted to another spot. As the plants grow the earth is heaped round them. I have observed that, with some exceptions, those plants which flower the same season seldom produce tubers. My experience has proved that the produce of the first season is not to be relied on as an indication of future productiveness; therefore no seedling should be rejected the first year. I recollect a plant that produced but one tuber, about the size of a walnut; this produced the second year one hundred and twenty tubers of good size; but this degree of productiveness did not attend succeeding generations. I have observed in general that rough or scaly skinned potatoes are the driest, and often too the earliest. I plant every tuber produced the first season that is not less than a pea, for should one sit on a good variety, it is then more rapidly increased; it is but a lottery, and some space of ground must be allotted to the drawing of it. I have had as many as three hundred varieties growing at once. Of course each variety must be tallied, and a memorandum kept of every thing connected with each. Each variety should be tested the second year, at the time it is taken up, and again in the spring, and those that are good at both seasons preferred for future trial. Indeed, all may be rejected but the one that has the greatest number of the qualities noted. In this way every one may procure sooner or later a good variety of potatoe. It is of the greatest importance to procure in this way, for difference of soil, and even perhaps of situation, seems to have singular effects, a fine potatoe in one soil proving bad in another, and *vice versa*. I have one variety that possesses the 1st, 2d, 4th, 5th, 6th, and 7th qualities, which I have cultivated for about 18 years, and I have not yet succeeded in raising a better. It seldom, however, yields above twenty bolls an acre, of old Ross-shire measure, the peck being fifty-six pounds. Though there are many sorts more productive, yet this potatoe keeping very long under the management already described, has brought it into very general use in this quarter. I have had young potatoes of this sort, of tolerable size, at my table along with tubers of the previous year. It is ripe by the middle of September. During the two last seasons, the sets of potatoes decayed in many places. None of my own were affected, but some of my tenants lost large patches. I observed a wire worm on some of the decayed roots, but whether this worm was the cause of the failure, or the failure of the sets induced the insect, from whose eggs the worm proceeded, to lay them on the set, I could not ascertain. It often happens that effects are regarded as cause in such matters. It is my practice to have the potatoes cut into sets, and spread out to dry during ten days or a fortnight before planting them. This serves to prevent risk of their rotting in the ground. But I have known sets of some varieties rot soon after the appearance of the plant above ground; and others I have taken up sound when the crop was ripe. Thus it is clear that long keeping does not depend on the *mode* employed to preserve potatoes, but on the natural quality of a variety; and the varieties ought to be increased from seeds until the qualities I have enumerated are found in one, or at least the most important of them. It is the opinion of some that the productiveness of potatoes decreases by long cultivation. I doubt, at least it has not occurred to my observation. If a variety be planted on a soil different from that in which it has succeeded, it may fail, and I have known this to happen.

On the whole, I conceive that the object of the Society can be best attained by the recommendation to every one interested in the culture of potatoes, to raise new varieties from seeds. Seedlings rejected, I mean the second year's produce, need not be thrown away, but given to cattle or pigs, so that the space occupied by the plants cannot be said to have been misapplied.

Since the above notices were written, extensive and accurate experiments have been made in the garden of the London Horticultural Society, in reference to the question, whether it is best to plant sets or whole potatoes. I had long since found that sets were best. The first set of experiments made seemed, however, in favor of whole potatoes; but I pressed a repetition, and also repeated the experiments myself, and the question has now been finally decided in favor of sets. It might perhaps be of use that a well prepared abstract of the papers in the Horticultural Transactions should be drawn out for the *Quarterly Journal*. A great deal of nonsense has been published about the remarkable failures of the potatoe crop in different places. The thing is still a mystery, which may not be cleared up for some time. It appears that early planting gives heavier crops than late planting.

To prepare Orchard Grass Seed for Sowing.

The best seed is liable to fail, and this is the only difficulty, of any consequence experienced in the cultivation of this desirable and productive grass.

It is recommended to prepare the seed for sowing, so that it will come up, and grow as well as any other grass seed, to moisten the seed before sowing by spreading it, not very thin, on a floor, and with a watering pot sprinkle the seed pretty well, then mix all well together with a rake; if it does not appear damp enough next day add more water, the seed being light it will absorb a good deal, and immediately before sowing, spread as much plaster of paris as will bring it to a good state.—*Yankee Far.*

20,000 GENUINE Morus multicaulis, or Chinese Mulberrry, of one and two years' growth, by the dozen, hundred or thousand.

Also—30,000 White Mulberry, of one and two years' growth—for sale by ASA ROWE.

Greece, August 3, 1836.

COMMUNICATIONS.

Hybrids.

Does the stock produce any influence upon the seed of the graft to alter its character?

In other words, *will the seed of the graft partake of the character of the tree on which the graft grows?* Here is a pear grafted on a quince stock—we plant the seed of that pear,—will this seed produce a fruit which is neither a pear nor a quince, but a *hybrid*, partaking of the character of both? We propose this query, not because we have any doubts on the subject, but for the purpose of noticing the following statement, made in a communication of David S. Porter, in the Silk Culturist for August, in relation to grafting the Chinese mulberry on the other species, as the native and white: "Independent of their being no advantage as to hardiness, there will arise a disadvantage when the grafted trees come to bear seed. *The tree will be hybrided, and will not of course produce trees like itself from the seed;* and thus we shall get our mulberry trees mixed together, until like the peach, apple, &c., we shall not be able to tell what seed the tree will produce."

We know of no way in which *hybrids* are produced but by the communication of the pollen or dust of the flower of one species to the flower of another. Perhaps we do not apprehend the meaning of the writer. If he means that by grafting the Chinese into the top of the native mulberry, among its branches, where its flowers come in contact with the flowers of the native, its seed will become hybrided, the statement may be correct. But if, on the contrary, he means that the graft will produce a hybrid seed *from the influence of the stock on which it grows through the sap*, we must think the statement erroneous. The only influence we are aware the stock produces upon the graft, is the earlier or later ripening of the fruit, and maturing of the wood by the more scanty or more abundant supply of sap, and by the earlier or later suspension of the vegetative process in the stock. So far also as these causes operate in the *ungrafted* tree, to alter the flavor of the fruit, will they operate upon the fruit of the graft, to alter its flavor. Those fruits which grow on trees whose growth is stinted, and whose supply of sap is but small, ripen earlier, and are *higher flavored*, than the same kinds of fruit growing on trees of more vigorous growth, and more abundant sap. The pear engrafted on the quince, on account of the more limited supply of sap it receives, is said to ripen its fruit earlier than when growing on its own root. The natural period in which the stock ripens its own fruit, produces an influence also it is said upon the ripening of the fruit of the graft. Thus, if the stock be of an early kind, the fruit of the graft growing on it will ripen earlier than if the stock was of a late kind; because, at the season of the maturing and ripening of the fruit, nature supplies each tree with the kind and quantity of juices necessary for this object. We may take advantage of these laws of the vegetable economy, in hastening or retarding the period of the ripening of the fruit, and of the wood. Thus, if we have a tree which ripens its fruit too late for our climate, we must engraft or bud it on a stock of dwarfish stinted growth, or which ripens its fruit early; or if we have a tree which prolongs its growth too late in the fall to mature its wood, and is thereby subject to be killed by the winter, we must graft or bud it on one which suspends its growth early in autumn, and thereby check the growth of the graft, force it to harden its wood, and prepare for winter. It is upon this principle we have contended that an advantage is to be gained by grafting or budding the Morus multicaulis on the native and white mulberry. If we are wrong in the views we have now advanced, we wish to be set right.

W. W. B.

P. S. I observe one or two typographical errors in my last communication, which I would thank you to correct. In the latter part, instead of "spread from the root," it should be "sprout from the root,"—instead of "from numerous rooted stalks," it should be "form numerous stalks."

Hammondsport, Sept. 2, 1836.

Œstrus Equi, or Bot Fly.

This is the name of an insect well known to farmers in its appearance, and its influence is not unfrequently felt in the destruction of that most useful and noble of animals the horse. Horses, oxen and sheep, have each a peculiar species of gad fly, their natural enemy, which deposits an egg on the hair of the horse, beneath the skin of the cow or ox, and in the nostril of the sheep or deer, and in these various ways the race is propagated and perpetuated. The horse fly is well known, from its turned up extremity of its body, its perseverance in depositing its eggs, or nits, as some call them, and the dread which the horse manifests at their approach or presence. Mr. Eaton and others have described two species of the Œstrus equi, one of which is the common one, which sticks its eggs on the hairs of the legs principally, and the other one stings the horse under the chops by striking him violently, and thus deposits an egg beneath the skin in that place. This last is much less frequent than the first, and has attracted less notice, and its habits are consequently less understood. That its eggs ever produce the bots, or the small worm which is so destructive to horses, may well be doubted; as in all other cases where an egg of an insect is deposited beneath the skin, as in the Œstrus bovis or ox fly, or the chigo of the negro or white of the West Indies, the changes go on where the insect is deposited, swelling and suppuration take place, a partial cyst is formed, and the insect finally set free, rapidly undergoes its transformation to a perfect insect. We have never heard the suggestion made, but circumstances render it not at all improbable, that what is termed the horse distemper, or the suppuration, violent inflammation, and breaking of the glands of the throat, that sometimes attacks horses, is called, is occasioned by the irritation of the gad fly larvæ; as the commencement and termination of the disease is in the same place, and in the same manner, as it would be were such the cause of it.

The history of the progress and transformation of the common bot fly is simple and easily understood. The fly deposits its eggs on the hair of the horse in such a situation that in licking himself more or less of them will come in contact with his tongue, the warmth and moisture instantly hatches them, they remain attached to the surface of the tongue until they are swallowed with the saliva and food into the stomach; here they pass the larva and chrysalis state, and when voided by the animal, are soon ready for the final transformation to the perfect insect.

Some farmers have doubted whether the egg could be hatched in this way; but all doubt on the matter may easily be put at rest, by moistening the hand with spittle and passing it slowly over the matured egg, or by scraping off a few of them and holding them in the hand moistened and closed for a few moments, when the larvae or maggot will be found alive and active. It is to be regretted that farmers in general not only allow the insect to deposit its egg with impunity; but also use no effort to prevent their being taken into the stomach, by scraping them off occasionally from those places most liable to be bit or licked by the animal, or by washing the legs at times with such substances as will destroy the nits without injuring the horse. This a decoction of tobacco will do, as will the smoothing down the hair with a rag moistened with spirits of turpentine. In either case there is no necessity for a profuse application, as the egg only requires to be wet, and these are always near the outer extremity of the hairs. The months of August and September are those in which the bot-fly is most active; and a little care and attention to his animals at this time will prevent much injury and suffering to the horse, if not eventually his total loss.

W. A.

Composts, Mud for Manure, &c.

"Sir John Sinclair observes, that in making composts it has been ascertained by a number of experiments, that two bushels of unslacked lime are sufficient to each cubic yard of earth of a medium quality, and as eighty cubic yards are sufficient to manure an acre, one hundred and sixty bushels is the quantity required. A less quantity, however, will answer a valuable purpose, and no precise rules are necessary; for a compost without lime, or lime not mixed in compost, is valuable for manure.

Dr. Deane observed that a "layer of mud will be no bad ingredient in a heap of compost. But it should be contiguous to a stratum of lime, if that can be obtained. But where this is wanting, new horse dung is the best substitute to excite a strong fermentation." * * *

The Albany Cultivator asserts, that "composts in which no fermentation takes place, can be of little advantage. There is no volatile matter given off, and no tendency exists to break down and render soluble ligneous or woody matter. Lime operates more powerfully than dung in inducing fermentation in vegetable matter, though it is not prudent to use it in combination with stable dung; I have found by experience that it causes too violent action, and dissipates nearly all the putrefying properties. Composts are particularly adapted to all the family of small grains, and for top dressing grounds, where this latter practice is tolerated, mere earthy matters add nothing to the compost pile; they merely prevent the waste of other materials, which compose it. In making composts, therefore, for field use, earth should be preferred, which abounds in vegetable matter; and the litter, vegetable refuse, urine, soap suds, ashes, &c., should be added, which are ordinarily wasted, and which form annually a large aggregate on a farm."

The too common practice of spreading barn yard manure over mowing or meadow land is very wasteful and extravagant. Most people appear to think that they have nothing more to do

than to pile on barn yard manure in great quantity on any soil, and for each and every sort of produce, and their crops and fortunes are made. But the truth is, that the application of unmixed dung to land in tillage is sometimes not merely useless, but absolutely injurious. We have the assertion of an experienced cultivator, that he actually nearly destroyed his grass in a mowing lot by spreading on this soil in the spring a quantity of fresh dung taken from the pig sty. "The dung," he says, "was of too hot a nature, and caused the turf to be so much scorched by the sun, that the grass was burnt up." It is true, that fresh dung applied to plough land does not often produce that effect. But the manure in that case, by mixing with the soil, forms a compost, and the dung is as it were diluted with earth. Still we hear farmers complain in dry seasons, that the dung which they apply to their soil does more harm than good, by increasing the injurious effects of drouth. But if it were well mixed before it was applied with two or three times its bulk of earth, it would preserve against drouth instead of increasing it. A plant will no better grow on a muck heap than on a sand heap; and in some cases pure sand would be a better application to increase the fertility of a soil than unmixed dung.—*N. E. Far.*

Acclimation of the Chinese Mulberry.

The Secretary of the Horticultural Society of Antwerp, M. Emilien de Wael, now on a tour of the United States for scientific purposes connected with entomology, &c.. has communicated to the President of the Massachusetts Horticultural Society the method of acclimating the Chinese mulberry, as practised in Belgium, and which we think would be attended with like success in this country. We copy the whole letter as presented to the society and published in the New England Farmer.

"Since I have been in this country I have heard of several complaints, chiefly from the Hartford Mulberry tree planters, of the difficulty experienced the last two years in making the *Morus multicaulis* stand your winters. This kind of mulberry is easily acclimated if a proper mode of culture be adopted in places where it is planted. In Belgium, the winters, notwithstanding they are not so severe as yours, often give us great trouble, and the influence of the cold was repeatedly experienced on these mulberries, which were often killed down to the roots.

"The late *J. Le Condele* of Hambeck, near Brussels, suggested the idea of having different modes of experiments adopted in distant places. And the one which proved the most efficient, was to cut down yearly, the Morus multicaulis, in the same manner as is done with willows in a *Salictum*, that is to say, at a few inches above the soil, and to cover the remaining trunk with dead leaves; in three or four years, the roots being stout enough, they did not require any more covering. From the buds preserved on the plants, fine and hardy shoots came forth, giving larger and more lively leaves to feed the silk worms upon.

"It has been stated to me in a letter from Batavia (Island of Java,) that this mode of culture is much in use near Manilla and in parts of China, not on account of the cold, but in order to keep the Morus in a shrubby state, which affords greater facility for gathering the leaves in the season when desired. There the mulberry seems to be planted in fields as Indian corn is here,—in the fall of the year the plants are deprived of their branches, the numbers of which is continually increasing, and growing in one season from five to eight feet, which growth is fully equalled by our own. I would advise a similar experiment in this State; it might, perhaps, answer well."—*Silk Cul.*

Beet Sugar Society.

The Secretary of the Philadelphia Beet Sugar Society has given notice, in the Commercial Herald, that he cannot answer in detail the various letters addressed to him from various parts of the Union, and adds, "the papers published will contain such information as the society may from time to time be possessed of on the subject." The impropriety, therefore, of writing him, and especially the injustice of subjecting him to the payment of postage are too manifest to be unseen. Mr. Pedder, the agent of the Society, who has spent four months in France collecting information on the subject, has returned, and will probably soon spread before the public the result of his investigation.—*Ib.*

Cultivation of the Fig.

The lovers of this excellent fruit will be gratified to learn that it may be cultivated in our climate with little expense and labor. During a late visit to the garden of Eliphalet Averill, Esq., of this city, we were presented with a fig, plucked directly from the tree, and of a flavor the most delicious. Mr. A. informed us that for ten years he had been experimenting on the cultivation of the fig, and that he had finally succeeded in preserving the tree and bringing the fruit to perfection. He also kindly gave us a statement of his method, which we lay before our readers in the hope, that at least some of them will be induced to try the experiment, as we have no doubt of its complete success. The fig tree is propagated by means of layers and cuttings—if the latter are used they should be at least one foot long.

The method of Mr. A. is as follows. He lays down the branches in June, which form roots and grow luxuriantly. Immediately after the leaves fall off in autumn, and before hard frosts destroy their vitality, he lays them down and covers with earth to the depth of at least a foot. In order that a part of the roots may retain their original position in the earth and be ready to furnish nourishment early the ensuing spring, he loosens the roots on one side of the tree and leaves those on the other undisturbed—taking care that those loosened are not mutilated or otherwise injured. He then bends the branches over those roots that are left in the ground, fastens them with pegs and covers both roots and branches with mellow earth to the depth above stated. In this condition he leaves them till the middle of May, or the first of June, according to the forwardness or backwardness of the season, and then uncovers them—sets them upright, and supports them with props to keep them in a right position. By repeating this process every winter he has succeeded in preserving his trees till they have attained a good size, and produce fruit in perfection and abundance.

The fig tree in tropical climates has a constant succession of crops. In Georgia it yields three crops, and in New England, in good seasons, it will produce two. When the figs are half, or two-thirds grown, they cease growing and present every appearance of not coming to maturity. To facilitate their ripening a drop of olive oil is put upon their blossoms ends which in eight or ten days, produces an extraordinary effect. In this time they obtain their full size, assume a liver color, and in delicacy of flavor as much exceed preserved figs as fresh peaches do those that are dried in the common manner.—*Ib.*

September.

A correctly calculating cultivator will make even his hogs labor for a livelihood. This may be done by throwing into thair pens totatoe tops, weeds, brakes, turf, loam, &c., which these capital workmen will manufacture into manure of the first quality. You cannot sow winter rye too early in September. If it be sowed early its roots will obtain such hold of the soil before winter, that they will not be liable to be thrown out, and killed by frost. It may be sowed early to great advantage in order to yield green food for cattle and sheep, particularly the latter, in the spring. Winter wheat, likewise, cannot be sowed too early in September. Attend to the barnyard, and see that it has a proper shape for a manure manufactory, as well as other accommodations, adapted to its various uses. You may as well have a hole in your pocket, for the express purpose of losing your money, as a drain to lead away the wash of your farm-yard. True it may be spread over your grass ground, and be a source of some fertility to your premises, but the chance is that most of it will be lost in a highway, or neighboring stream.

Stiff, hard, cloggy land intended to be tilled should be ploughed in autumn. Fall ploughing saves time and labor in the spring, when cattle are weak, and the hurry of the work peculiar to that season presses on the cultivator. A slight sandy soil, however, should not be disturbed by fall ploughing, but lie to settle and consolidate through the winter. Select your corn intended for planting next season from the field, culling fine, fair, sound ears from such stocks as produce two or more ears, taking the best of the bunch. You will consider well which is the best method of harvesting corn, and adopt one of the best methods mentioned by Judge Buel. If the husks and bottoms of your corn, when stowed away for winter, are sprinkled with a strong solution of salt in water, (taking care not to use such a quantity of solution as to cause mold,) and when dealt out are cut fine with a straw cutter, they will make first rate fodder. Do not feed hogs with hard corn without steeping, grinding, or boiling it. The grain will go much the farther for undergoing some or all of these operations, and if a due degree of fermentation is superadded, so much the better.—*Complete Farmer.*

Extract from Gen. Tallmadge's Correspondence.

Cultivation of Silk, &c. in France.

PARIS, April 9, 1836.

"I have had the pleasure to attend, by invitation, at two meetings of the National Institute of France. It is a noble assemblage of scientific men, and a source of continual benefit to the public weal. A small sum, about 200 dollars, is allowed by the government to each member for his attendance at the weekly meetings, and for which the Institute returns answers to the government when required, upon questions connected with the arts and sciences, including agriculture, manufactures and the kindred branches. I have also attended a meeting of the Agricultural Society, and was present at the awarding of the premiums for the services of the last year, and found it not only interesting, but a fund of useful information. I send you their *Programme* of their proceedings, as also of the subjects and prizes offered for the next year. This paper will afford useful suggestions to the American Institute.

The public institutions of France are open and accessible to strangers, and are a matter of just pride to the nation. The specimens in mechanics are curious and useful. There is a *Swede* here, now a denizen of France, who claims to have made an essential improvement upon the steam engine. His proposition is to dispense with the steam boiler, fire and its attendant fixtures, and to adapt to a common high pressure engine, the use of *ammoniacal gas* as an efficient power. It is alledged that this gas can be prepared in reservoirs, so as to come in place of fuel, at a cheaper rate, with an exemption of all danger of explosion, and a great saving of the space for the engine and its fixtures. It is insisted there will be a saving of at least one half in expense, as well as in space. He has shown me his model. He has obtained a patent for England, and also for France, and he intends to sail in a few weeks for New York, with a view to obtain a like patent in our country.

Many questions of interest under our patent laws have been propounded to me here, and, among other things, it is noticed that while England and France open their patent privileges to all the world, America limits hers to her citizens, or to *resident aliens intending to become citizens.*

I have visited the anatomical museums and medical establishments, and attended operations at the hospitals. Very many opportunities are offered to medical students; and when we cast a look, in comparison, to New York, who will not breathe a sigh, that bad organization and personal feuds, should have so long prevented a like growing institution in our city, where I insist there is equal talent and more *enterprise.* We heard so much *pro and con* in relation to Monsieur Seviale's new process of Lithotomy, that I have

made his acquaintance and witnessed his operations on both male and female patients. The stone was successively broken and extracted, and the patients arose and walked away almost uninjured. The operation is not often very severe or painful. I have full confidence in his improved plan, and his instruments, if they are not abused in conceited or unskillful hands. I was gratified to find among the spectators two or three medical young men from our country.

I send you a report of M. Bodin on the agriculture of France. These papers demonstrate the great interest felt in France in the improvement of its agriculture; and it appears to be increasing in its general prosperity. It is often said, that the husband with his vineyard, and the wife with the silkworms, are at present the best sources of national wealth. Much pains are taken to improve the culture of silk; it has hitherto been carried on almost entirely in Italy, and principally in France, by private and individual industry, and supposed to be unskilfully and imperfectly conducted. The government have established three model farms, for the purpose of various experiments in agriculture, and especially in silk. I have been in the interior to visit one of those farms, and was permitted to examine its details. A separate house is prepared for feeding the silk worms, which is heated by a furnace, its heat regulated by a thermometer, and its ventilation attended to with care and system. M. Beauvais, its director, states, that 1 oz. of eggs will produce in India 20 lbs. silk; in Italy, 5 to 6 lbs. do.; in France, 5 lbs. That this great difference of product arises from care and skill and treatment. That he has last year, in his experiments, increased the product up to thirteen pounds, and is confident of a greater increase this year. He thinks a dry and cool climate is best, and that the room should be made equal in temperature by heat and ventilation. I have observed with care his model fixtures as to the frames, heat and ventilation. The worms are here fed by leaves, put on a net suited to the frames, and which is to be laid over them: the worms soon ascend to the new leaves, and can then be removed on the net and the frame cleaned. When the leaves of different kinds of mulberry are mixed together, the worms will select and gather on the *Chinese* mulberry, and yet it is not a settled point here in what consists the superiority of the Chinese over the other kinds of mulberry. The model plantation of trees is planted in rows of 12 feet apart. The trees are six feet apart, in the rows, and are cut down so as to have four or six sprouts from near the ground, and these in after years are cut off so as to be kept dwarfed for use in picking the leaves. It is believed an acre or two, thus allotted to trees, and near the house, will give such facilities and products, as to make the best result, and so it appears to me. The Chinese mulberry will sprout from cuttings about six inches long, and set in a row four inches distant. I have visited one garden where 50,000 are just set out in this manner, and where 20,000 were thus raised last year, and have been sold, and, as is said, to the American market. The French farmers have no aptitude to change, and comparatively few Chinese mulberries are set out in France. If the nurserymen are to be credited, they have sold, this last year, one hundred trees for America for ten transplanted here. From my own observation I believe it to be the case.

M. Beauvais has tried, with profit, a room heated to 18 and 20 degrees (Reaumur) and says 28 and 30 are used in India. M. Beauvais and several other growers of silk, whom I had seen in the country, have since visited me at my rooms in this city, and have communicated freely with me. There is often discrepancy in their statements and opinions, and their allegations will only serve as clues to inquiry; but I trust the safe common sense and keen observation of our people will soon understand, as a science, the growing of silk much better than Europeans, who, after the experience of ages, act more from usage and habit than skill and experience. I have entire confidence in the full success of our people in the culture of silk. Most of the gentlemen I have alluded to, have agreed that a warm climate is not so good as a regulated room; and one of the gentlemen, of experience, says he constantly uses plates with *chlorine* in the room to purify the atmosphere, and without injury to the worms. All agree that a damp climate is injurious, and therefore say that silk does not prosper near the ocean, where the damp westerly winds prevail;—and they express an opinion that our warm and dry summer climate is admirably fitted for the business of silk in families as well as in establishments. France is found to produce not more than one half the silk she manufactures; it is purchased from Italy and the Archipelago. Her thirty-three milions of inhabitants cannot afford space sufficient for the mulberry trees to supply her own wants. Our country is exempt from this difficulty. Various books or manuals of instruction in the culture of silk, have been published here for the use of families. I have collected them, and shall endeavor to bring them with me for the library of the Institute. I must omit further details till an opportunity for personal explanation.

From the Maine Farmer.

Diseases of Sheep.

Mr. Holmes—Having observed much of late in the Farmer respecting disorders in sheep, particularly the worms in the head, I am induced to make a few remarks from my own experience. I have lost 6 sheep this spring past, two by drowning, and four in the lingering way so often represented and generally imputed to worms in the head.

Every sheep that I have lost for two years past, excepting by accident, have been yearlings, and more than three-fourths of them wethers. Their symptoms were feebleness and swelling about the chops. I examined the heads and found worms in every head, from 10 to 17 in number. One prime ewe, drowned by falling into a brook, had at least an average number with the four that died, lingering as before named, and the one of the four above named had the most worms, the cavity between the eyes being filled and some in the nostrils; and as those that have written on the subject furnish no evidence that the worm is the direct cause of the death of the sheep, I am persuaded that the disorder is a species of the rot, caused by a long and tedious winter—as the scurvy is to the sailor so is the rot or this disorder to the sheep—one produced by a long voyage and the other by a long winter, and as raw vegetables are found the most effectual remedy or preventive for the former, so I have found them in the latter case. If our farmers will turn their attention more to the raising of ruta baga, or some root crop, and give their sheep a sufficient supply of them, I believe the disorder will disappear from among us, or at least in a great measure. The manure that a flock of sheep make will furnish abundant means for raising the roots, and these added, given with fresh meadow hay, will give sheep a good living, and I believe we should have but little to fear from the worms in the head. The frequent suggestions that the worm-fly deposits its eggs on the exterior of the nose, and that they continue there a sufficient time to hatch, and that they then make their way up the nostrils against the natural drain and the frequent efforts of the sheep to blow out any obstructions from the nose, appears to me doubtful. A late writer in the Farmer seems somewhat puzzled to know the use of those worms, or what they were made for, but I think the question is easily put to rest. Who knows that those little animals have not each as much enjoyment as the sheep herself. If so, there must be at least ten times the amount of enjoyment that there would have been had they not have existed, and the object of our Creator and Benefactor is accomplished. These little families have their little worlds, and how much they enjoy we know not; and perhaps some of the more thinking of the creeping races wonder as much what those massy animals were made for—namely, man, who crush their feeble races under their feet, not only with impunity, but without remorse, as do we for what they were made.

J. Curtis.

To Fatten Hogs.

An English farmer fattened eight pigs in the following manner, which may be recommended in cases where a constant and regular attention cannot be given to feeding the animals. He placed two troughs in the stye; one he filled with raw potatoes, the other with peas and gave no water. When the pigs were thirsty they ate the potatoes. In this way it is probable that the animals would not only thrive without water, but would need no antimony, brimstone, nor any other medical substances; for new potatoes being cooling and loosening, might serve at once for food and physic. Instead of peas, perhaps dry Indian corn, or what would be better, Indian meal might be substituted. This mode of management with swine was first recommended in the N. E. Farmer, Aug. 6. 1824, and has been adopted by a correspondent of the *Northern Farmer*, who directs as follows—

"Shut your hogs up the first part of September; feed them with dry peas, or corn; give them raw potatoes, but no drink. The grain creates an inward fever; the animals being uneasy from thirst, will chew the potatoes fine, but chew slow, and get the substance of them as well as if boiled. This has been my practice for years past. I give them as much grain as they will eat; and after that each grown hog will eat from six to eight quarts of potatoes per day."

Cunningham in his *Two Years in New South Wales*, relates—"I had often heard it said among sailors, that pigs would fatten on coals, and although I had observed them very fond of munching up the coals and cinders that came in their way, still I conceived they might relish them more as a condiment or medicine than as food, till I was assured by a friend of mine, long in command of a ship, that he once knew of a pig's being lost for several days in a vessel he commanded, and it was found at last to have tumbled into a coal hole, and there lived all that period without a single morsel of any thing to feed on but coals; on being dragged out it was found as plump and fair as if it had been feasting on the most nutritious food. Another friend told me of a similar case, which came under his observation; and although these may be solitary instances, yet they serve at the least to show the wonderful facility which the stomach of certain animals possess of adapting their digestive powers to such an extraordinary species of food, and extracting wholesome nourishment therefrom. When we consider coal, however, to be a vegetable production, containing the constituent principles of fat, carbon, hydrogen and oxygen, our surprise ceases.

Young pigs require *warm* food to make them *grow*. Corn and cold water will make them sleek and healthy; but warm beverage is considered requisite to a quick growth.—*Marshal's Inland Counties.*

The same writer observes, that "every stye should have a rubbing post. Having occasion to shut two hogs out of a stye without one, into another with a post accidentally put up to support the roof, I had a full opportunity of observing its use. The animals when they went in were dirty, with broken ragged coats, and with dull heavy countenances. In a few days they cleared away their coats, cleaned their skins, and became sleek haired. The *enjoyment of the post* was discernible even in their looks, in their liveliness and apparent contentment. The method I have always adopted, and shall pursue till a better is pointed out, is, to fill about three parts of a large kettle with potatoes; I scatter over them about a peck and a half of barley meal, (or Indian meal,) then fill the kettle with potatoes, adding just as much water as will cover them. Then the meal does not sink to the bottom of the kettle where it will encrust and burn, nor will it be liable to be wasted by boiling over. The nourishment of the meal is in a great degree extracted by the water. After the potatoes are well boiled, let the whole be mixed and bruised in tubs, with a clean spade, so as to form a pulp.

By this method all the nutritious powers of the meal are incorporated, and therefore much easier digested, and the hogs require no water.

"In cold weather it should be given blood warm. The swine while fattening should be kept as clean as possible, with dry litter. Twice or thrice a week add about three table spoonfuls of salt to each half bushel of their food, which assists digestion and promotes appetite. When too much salt is given it acts as a purgative, which prevents the deriving of due nourishment from food."—*New England Farmer.*

Planting Potatoes.

Mr. Green—Let us have a little agriculture for your agricultural friends, as well as a little politics. I have repeated the experiment of planting the large, the small, and cut potatoes, and am satisfied that it amply pays to take the largest and fairest potatoes for seed. I planted on the 7th of May of the Mercer kind:

6 hills of large—weight of seed 46 oz.
yield 228 oz.
6 hills of small—weight of seed 9 oz.
yield 112 oz.
6 of cut, root end—weight of seed 24 oz.
yield 192 oz.
6 of cut, sprout end, weight of seed 22 oz.
yield 196 oz.

The ground was in all respects equal, and was dug with a spade when I planted; I only passed over them once with a garden rake after they came up; they had no other ploughing, hoeing, digging or harrowing, until I gathered them on the 9th of September. I will observe too, that the six hills of large not only yielded nearly three times as much in weight as the six hills of small, but those produced from the large potatoes were larger and fairer than those produced from the small.

The experiment is yet, however, incomplete. It should be tried with 2, 3, and 4 halves of cut potatoes in a hill, and also with 2, 3, and 4 small whole potatoes in a hill, and mark the yield from the same extent of ground.

I planted also at the same time (7th of May) a square 66 feet by 84—all of large whole potatoes. It had no more dressing than those above; that is, a single raking with a garden rake from the time they were planted till they were gathered, and the yield, allowing for what we used through the summer, was about 50 bushels. This gives about 400 bushels to the acre. And then what a little labor!—the digging of the ground only once in the spring; probably two good ploughings and harrowings before planting would do the same as once digging.

It will be recollected by farmers who know the different kinds, that the Mercer is not a large producer. It will be recollected also that the tops of the Mercer never grow large. I am of opinion they may be planted as close again as I planted them, and that from 800 to 1000 bushels per acre may be raised. R. L.

P. S. Please accept of a little sample of these Mercers by way of trying the quality.

In gathering potatoes, the sun should never shine on them a minute more than can be avoided, and if kept in a dry cellar in barrels or boxes, they are better than if put on a damp cellar floor, or buried.—*Rahway Advocate.*

On the Preservation of Grapes and Plums.—At Berlin, grapes are preserved by cutting the bunch when ripe with about one foot of the wood, above and below the footstalk. The ends of the wood are dipped in hot pitch, to keep in the moisture, and the bunch is then hung up in a dry place. The Quetch plum is preserved till March by the following method:—"Gather them when perfectly ripe and dry; put them in a glass jar or bottle, closely tied up, and pitched so as to exclude the air, and then bury them in dry soil seven or eight feet deep, so as to be out of the reach of any change in temperature or moisture. When taken out, they must be used immediately.

A break of a serious character occurred on the Ohio Canal, on Tuesday week, in the vicinity of Tinker's Creek.

Monroe Horticultural Garden and Nurseries, Greece, Monroe Co. N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired delivered on the canal one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.

oct 1

To Farmers, Breeders and Others.

THE subscribers would respectfully inform those pursuing any of the above branches of business, that they have just imported from Holderness, in Yorkshire, the prize bull Cottingham, of the pure improved Short Horn breed, which has been selected with great care from the stock of that well known breeder, Mr. Collins, of Danthorpe, in Holderness. Gentlemen wishing to stock their farms with an improved breed, are requested to make early application, as he will be limited to a certain number of cows this his first season.

COTTINGHAM,

Was bred by Mr. Collins, of Danthorpe, Yorkshire, England,—is of a hazel and white color. He was got by Collins' Invincble, (who has obtained the premium 7 successive years at the Holderness Agricultural Show,) his dam by Jackson's Rainbow, grand-dam by Strickland's Fusileer, great grand-dam by Harding's noted bull the Baronet, who was sold for £640 sterling, to go abroad.

The subscribers have also just imported 2 new Leicester Rams, which sheared last spring thirteen pounds one ounce of wool each, which are for sale or to be let for the season, on reasonable terms.—Applications, if by letter, post paid.

Signed, GEORGE HENTIG,
CHARLES HENTIG.

Grosse Isle, Monquagon, Michigan, Sept. 22, 1836. } oct 1-f3t

Green's Patent Straw Cutter.

A new Invention, on a new Principle.

THE subscribers having obtained the exclusive right of making and vending the above machine for a large district of country, take the liberty of informing the public, that they have associated themselves under the firm of JAMES D. SHULER & Co. and have erected in the village of Lockport, Niagara Co. an extensive machine-shop, for the construction of this useful and deservedly popular machine, where it may be had at any time, warranted of good materials and construction, and so confident are they that it will suit purchasers that if they are not satisfied on trial, they may return the machine and the money will be refunded. As this machine when examined will recommend itself, the ordinary course of presenting certificates (although hundreds might be obtained) will not be resorted to, yet the subscribers conceive it their duty to give the public thefollowing description and notice taken of it by public constituted societies. Price at shop $30. All expenses of transportation, &c. additional.

J. S. SHULER.
J. D. SHULER.

Extract from the Report of the Committee of the Brighton (Mass.) Fair, on Experiments, Discoveries and Inventions.

The Committee on Experiments, Discoveries and Inventions, respectfully report: That in the exhibition of Machines and Implements immediately useful to the farmer, there were several which deserve the patronage of the society, among which are the Straw Cutting Machine, invented by Benj. Greene and introduced to use in this state by J. R. Newall. In this Machine, the cutting is performed by a number of knife edges, which are fixed upon a cylinder.—These are, in rotation, brought in contact with a leaden cylinder, which acts as a block upon which the straw is cut. As the straw is drawn in between the cutting edges and the leaden cylinder, no separate feeding rollers are required. The machine is compact in its form and operates with great rapidity, by the application of a small force. The committee were led by the very strong evidence in its favor, from persons who had used it for many months, to award to its introducer the premium of $10.

Wm. Prescott,
Daniel Treadwell,
Richard Sullivan, } *Committee.*

Brighton, Oct. 14. 1835.

From the Cultivator.

Green's straw cutter.—This is the most simple and efficient machine of the kind that has yet been offered to the public. It is made very strong, and not liable to become injured, nor to get out of order. The apparatus consists principally of two cylinders; the upper one is of iron, having the requisite number of knives set in groves. All that is necessary in operating is to put in the straw, and turn the crank. After the straw is once cut, it can be put in again, and cut with increased rapidity the second time.—More than double the quantity can be cut in the same space of time by this than by any other machine used in this section of the country.

I set a man at the crank, and with the hay close to the machine commenced feeding. With my utmost exertion I could not keep it regularly supplied. In five minutes, we cut *eleven bushels*, heaping measure, of hay. Had it been fed according to its power of execution, one fourth more would have been cut.—Had I used straw instead of hay the quantity cut in the above time, would have been as great, as it is more easy to supply the machine without interruption. It cuts corn stalks with rapidity, particularly small ones. The box is made large, and by putting in a good deal of hay at once, or by having it close to the machine, one person can feed it and turn the crank at the sametime.

Extract from the report of the Committee of the Albany Fair on Farm Impliments, &c.

Green's straw cutter, presented by C. N. Bennett, was the only implement of the kind exhibited. It is a hand crank power. It is 5 feet long by 2 1-2 feet wide. It has 12 knives, 8 inches, on a 4 inch cylinder, and works upon a cylinder or roller of ead—will deliver two bushels of cut hay per minute—feeds itself and may be managed by a stout boy. Price, highly finished, $30. The committee do not hesitate to reccommend this as the most complete and perfect implement of the kind which has come under their notice. They have awarded to Mr. Green, a beautiful cake basket valued at $15, for the invention of his valuable machine.

J. BUEL, *Chairman.*

Reynols & Bateham, at the Rochester Seed-store are appointed agents for the sale of the above machines where a constant supply will be kept on hand.

Rochester, July 24th 1836.

Albany Nursery.

BUEL & WILSON, advertise to their friends and the public, that they now have on hand a good supply of Pear and Plum Trees, embracing the best new varieties, selected with care in the London Nurseries, last winter, by one of the partners, and in fine condition for transplanting this fall. In addition to their ordinary assortment of Peach, Apple and other Fruit Trees, Forest Trees, Ornamental Shrubs, Green House Plants, Dahlias, &c. Their assortment of Dahlias and Roses is particularly choice and extensive. Orders respectfully solicited.

Sept. 14, 1836. 3m

Force of the Waters.

Extracts from Audubon's Ornithological Biography, Vol. II.

"It was the month of September. At the upper extremity of Dennisville, which is itself a pretty village, are the saw-mills and ponds of the hospitable Judge Lincoln, and other persons. The creek that conveys the logs to these ponds, and which bears the name of the village, is interrupted in its course by many rapids and narrow embanked gorges. One of the latter is situated about half a mile above the mill-dams, and is so rocky and rugged in its bottom and sides as to preclude the possibility of the trees passing along it at low water, while, as I conceived, it would have given no slight labor to an army of woodsmen or millers to move the thousands of large logs that had accumulated in it. They lay piled in confused heaps to a great height along an extent of several hundred yards; and were in some places so close as to have formed a kind of dam. Above the gorge there is a large natural reservoir, in which the head waters of the creek settle, while only a small portion of them ripples through the gorge below, during the latter weeks of summer and in early autumn, when the streams are at their lowest. At the neck of this basin the lumberers raised a temporary barrier with the refuse of their sawn logs. The boards were planted nearly upright, and supported at their tops by a strong tree extended from side to side of the creek, which might there be about forty feet in breadth. It was prevented from giving way under the pressure of the rising waters by having strong abutments of wood laid against its centre, while the ends of these abutments were secured by wedges, which could be knocked off when necessary. The temporary dam was now finished. Little or no water escaped through the barrier, and that in the creek above it rose in the course of three weeks to its top, which was about ten feet high, forming a sheet that extended upwards fully a mile from the dam. My family was invited early one morning to go and witness the extraordinary effect which would be produced by the breaking down of the barrier and we all accompanied the lumberers to the place. Two of the men on reaching it threw off their jackets, tied handkerchiefs round their heads, and fastened to their bodies a long rope, the end of which was held by three or four others, who stood ready to drag their companions ashore in case of danger or accident. The two operators, each bearing an axe, walked along the abutments, and at a given signal knocked out the wedges. A second blow from each sent off the abutments themselves; and the men leaping with extreme dexterity from one cross log to another, sprung to the shore with almost the quickness of thought. Scarcely had they effected their escape from the frightful peril that threatened them, when the mass of water burst forth with a horrible uproar. All eyes were bent towards the huge heap of logs in the gorge below. The tumultuous burst of the waters instantly swept away every object that opposed their progress, and rushed in foaming waves among the timber that every where blocked up the passage. Presently a slow, heavy motion was perceived in the mass of logs; one might have imagined that some mighty monster lay convulsively writhing beneath them, struggling with a fearful energy to extricate himself from the crushing weight. As the waters rose the movement increased; the mass of timber extended in all directions, appearing to become more and more entangled each moment; the logs bounced against each other, thrusting aside, demersing, or raising into the air those with which they came in contact: it seemed as if they were waging a war of destruction, such as ancient authors describe the efforts of the Titians, the flamings of whose wrath might to the eye of the painter have been represented by the angry curlings of the waters, while the tremulous and rapid motions of the logs, which at times reared themselves almost perpendicularly, might by the poet be taken for the shakings of the confounded and discomfited giants. Now the rushing elements filled up the gorge to its brim. The logs, once under way, rolled, reared, tossed and tumbled amid the foam, as they were carried along. Many of the smaller trees broke across, from others great splinters were sent up, and all were in some degree seamed and scarred. Then in tumultuous majesty swept along the mingled wreck, the current being now increased to such a pitch, that the logs, as they were dashed against the rocky shores, resounded like the report of distant artillery, or the angry rumblings of the thunder. Onward it rolls, the emblems of wreck and ruin, destruction and chaotic strife. It seemed to me as if I witnessed the rout of a vast army, surprised, overwhelmed, and overthrown. The roar of the cannon, the groans of the dying, and the shouts of the avengers, were thundering through my brain; and amid the frightful confusion of the scene, there came over my spirit a melancholy feeling, which had not entirely vanished at the end of many days. In a few hours almost all the timber that had lain heaped in the rocky gorge was floating in the great pond of the millers; and as we walked homewards we talked of the Force of the Waters."

On Shortening the Tap Roots of Trees.—The following principles are to be laid down:

1. An injury in any one part of a plant occasions a change in the natural developement of the other parts.

2. Roots and stems are always in a certain degree reciprocally proportionate to each other.

3. The tap root does not form a part of every plant; but, where it does so, it is an essential part of that plant.

4. By shortening the tap root, one or the other of the following consequences will result:—Tender plants will be more easily destroyed by severe weather; all sorts of plants by dry weather, from their roots not being so deep in the soil: the wood of the timber trees will be less durable, their trunks shorter, and their heads broader and less high; and fruit trees will blossom earlier and more abundantly, and their fruit will be larger and better flavored.

5. To transplant trees without injuring their roots, is difficult in proportion to the age of the tree, and the extent of the roots.

6. All transplanting ought to be done when the trees are young, and then only can the roots be cut without injury.

7. When the tap root descends into a bad subsoil, it brings on diseases in the tree.

The general conclusion which the writer draws, is, that where the largest and best timber-trees are an object, the seeds should be sown where the plants are to remain, and, consequently, the tap root never injured; but that, in fruit trees, it should always be shortened, to cause them to be spread out horizontal roots near the surface, among the nutritive soil.—*Transactions of the Prussian Gardening Society.*

Bees.

Some persons that keep bees neglect to take them up until some weeks after they have been consuming the honey in the hive. The bees cease to procure honey as fast as they consume it earlier in the season than is generally supposed. They lose after the first of September, unless they have access to the buckwheat that is in bloom. They will not generally collect honey enough to support them in the two last weeks in August unless the weather is very favorable to their laboring, and the season is wet so as to keep a supply of honey in the flowers. We have sometimes weighed hives every week or fortnight, and have found that in a dry season the hives were heaviest the last of July. A hive that gained ten pounds a week in the last of June and first of July, lost three pounds from July 23d to Aug. 6th. During this fortnight, the weather was as warm as it had been any time in the season, but it was very dry, and of course the flowers afforded but a little honey. If any person supposes that bees will gain, at this season of the year, let him weigh his hives every week, and he will soon be convinced to the contrary, unless his bees have an unusually good pasture.—*Yankee Farmer.*

MR. HENRY WELLS, principal of the New York Institution for the cure of stammering, proposes to cure one class of stammerers in this city, if a sufficient number make application on the third or fourth of Oct. next, during which time he may be found at the Eagle Tavern in this city.

Terms from $25 to $100 according to the pecuniary situation of the applicant, and the nature of the malady. The indigent cured gratis. A cure in all cases guaranted or the money will be refunded. Circulars may be obtained, containing certificates and testimonials or any information required by addressing to Mr. WELLS, post aid, Palmyra. sept21-a12tr2tf2t*

25,000 Mulberry Trees.

WE have 25,000 White Italian Mulberry Trees 3 years old, which we will sell at $25 per 1000, or $3 per 100. If 5000 or upwards are taken, a deduction will be made.

REYNOLDS & BATEHAM,
sept 3 Rochester Seed Store.

Chinese Mulberry Trees and Cuttings.

THE best varieties of CHINESE MULBERRY, (Morus Multicaulis) from *France*, *Italy* and *China*, of *one*, *two* and *three* years' growth, may be had in large or small quantities, from S. WHITMARSH'S extensive collection, and forwarded to any part of the United States, according to order, with directions for propagation.

It is confidently believed, that the present mode of culture adopted by us, will prove a certain and secure protection against the severity of winter, and the best method, by which, to increase the foilage and multiply the number of trees.

All orders directed to the subscriber, will receive immediate and faithful attention.

In behalf of S. WHITMARSH.
DANIEL STEBBINS.
Northampton Sept. 7. sept18-7t*

ELECTION NOTICE.—*Sheriff's Office, Monroe County, Rochester, July* 23, 1836.—A general election is to be held in the county of Monroe, on the 7th, 8th and 9th days of November next, at which will be chosen the officers mentioned in the notice from the Secretary of State, of which a copy is annexed. ELIAS POND, Sheriff

State of New-York, Secretary's Office, Albany, July 15, 1836.

Sir—I hereby give you notice that at the next general election of this state, to be held on the 7th 8th and 9th days of November next, a Governor and Lieutenant Governor are to be elected.

I also give you notice that a Senator is to be chosen in the Eighth Senate District in the place of John Griffin, whose term of office will expire on the last day of December next.

JOHN A. DIX, Secretary of State.

To the Sheriff of the county of Monroe.

N. B.—The Inspectors of Election in the several towns in your county will give notice of the election of a Representative to Congress from the 28th Congressional District, and that 42 Electors of President and Vice President are also to be chosen at the general election aforesaid. They will also give notice of the election of Members of Assembly, and for filling any vacancies in county offices which may exist. july26

Monroe Horticultural Garden & NURSERY.

THE subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Strawberries, Ornaments Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots &c. &c.

ALSO—A few hundred of the Morus Multicaulis, or Chinese Mulberry, the White Italian Mulberry by the hunbred or thousand, Grape Vines of both native and foreign varieties, mosty of large size, for sale by the single vine, hundred or thousand, at reduced prices. The subscriber has a large collection of Green-House Plants of choice and select varieties, and in good condition.

☞ Orders for *Mr.* Rowe's Nursery received by the Publisher of this paper.

Catalogues will be sent to those who wish them, gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.